Montana Board of Oil and Gas Conservation
Environmental Assessment

Operator: Oasis Petroleum North America LLC
Well Name/Number: Otis 2658 43-23H
Location: SW SE Section 23 T26N R58E
County: Richland**, MT; Field (or Wildcat)** Wildcat (Bakken Horizontal)

Air Quality

(possible concerns)
Long drilling time: No, 30-40 days drilling time.
Unusually deep drilling (high horsepower rig): Triple derrick drilling rig to drill a single lateral horizontal Bakken Formation test, 20,787'MD/10,415'TVD.
Possible H2S gas production: Yes, slight H2S possible (Mississippian Formations).
In/near Class I air quality area: No Class I air quality area in the area of review.
Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under 75-2-211.

Mitigation:
X Air quality permit (AQB review)
X Gas plants/pipelines available for sour gas
__ Special equipment/procedures requirements
__ Other:_____

Comments: If there are existing pipeline for H2S gas in the area then gas must be tied into system or if no gathering system nearby H2S gas can be flared under Board Rule 36.22.1220.

Water Quality

(possible concerns)
Salt/oil based mud: Yes to oil based invert drilling fluids for intermediate casing hole. Horizontal hole will be drilled with saltwater. Surface casing hole will be drilled with freshwater and freshwater mud system.
High water table: No high water table anticipated in the area of review.
Surface drainage leads to live water: No, closest drainage is an unnamed ephemeral tributary drainage to the North Fork of Fourmile Creek, about 1/8 of a mile to the east from this location.
Water well contamination: No, no water wells within 1 mile in any direction from this location. Surface casing setting depth on the permit to drill is 1925'. Sufficient surface casing to cover Base of Fox Hills Formation. This well will be drilled surface casing hole with freshwater and freshwater mud to 1,925' and steel surface casing will be run and cemented to surface to protect groundwater.
Porous/permeable soils: No, sandy clay soils.
Class I stream drainage: No, Class I stream drainages.

Mitigation:
X Lined reserve pit
X Adequate surface casing
__ Berms/dykes, re-routed drainage
__ Closed mud system
__ Off-site disposal of solids/liquids (in approved facility)
__ Other: _____

Comments: 1,925' surface casing will be drilled with freshwater, steel casing will be run to 1,925' and cemented back to surface, to protect freshwater zones in adjacent water wells. Also, covering Fox Hills aquifer. Adequate surface casing and operational BOP equipment should prevent any drilling problems.

Soils/Vegetation/Land Use

(possible concerns)
Steam crossings: None anticipated.
High erosion potential: No, location will require a steep cut of up to 14.9' and a moderate fill of up to 13.6', required.
Loss of soil productivity: No, location to be restored after drilling, if nonproductive. If productive unused portion of this drillsite will be reclaimed.
Unusually large wellsite: No, a very large well site, 530'X320' designed for two well placement. Otis 2658 43-23H and Carl Federal 2658 43-23H.
Damage to improvements: Slight surface use appears to be cultivated lands.
Conflict with existing land use/values: Slight

Mitigation
__ Avoid improvements (topographic tolerance)
__ Exception location requested
_X Stockpile topsoil
__ Stream Crossing Permit (other agency review)
_X Reclaim unused part of wellsite if productive
__ Special construction methods to enhance reclamation
_X Other Requires DEQ General Permit for Storm Water Discharge Associated with Construction Activity, under ARM 17.30.1102(28).

Comments: Access will be over existing county road, #147 and another unnamed county road. New access road will be built into this location, about 3289' into this location from the county road. Oil based invert drilling fluids will be recycled. Completion fluids will hauled to a commercial Class II disposal. Cuttings and solids will be buried/solidified on site in the lined reserve pit. The lined pit will be allowed to dry and the pit backfilled. No concerns.

Health Hazards/Noise

(possible concerns)
Proximity to public facilities/residences: No residences within a 1 mile radius from this location. The Town of Bainville, Montana about 11.2 miles to the north and the Town of Fairview, Montana is about 11 miles to the southeast from this location.
Possibility of H2S: Yes, slight chance (Mississippian Formations).
Size of rig/length of drilling time: Triple drilling rig 30 to 40 days drilling time.

Mitigation:
_X Proper BOP equipment
__ Topographic sound barriers
__ H2S contingency and/or evacuation plan
__ Special equipment/procedures requirements
__ Other:_____

Comments: Adequate surface casing cemented to surface with working BOP stack should mitigate any problems.

Wildlife/recreation

(possible concerns)
Proximity to sensitive wildlife areas (DFWP identified): None identified.
Proximity to recreation sites: None identified.
Creation of new access to wildlife habitat: No
Conflict with game range/refuge management: No
Threatened or endangered Species: Species identified as threatened or endangered are the Pallid Sturgeon, Piping Plover, Interior Lease Tern and Whooping Crane. Candidate species are the Greater Sage Grouse and the Sprague's Pipit. NH tracker website indicates, three (3) species of concern: Great Blue Heron, Piping Plover and Whooping Crane. NH Tracker website list one (1) potential species of concern:

Hayden's Shrew.

Mitigation:
__ Avoidance (topographic tolerance/exception)
__ Other agency review (DFWP, federal agencies, DSL)
__ Screening/fencing of pits, drillsite
__ Other: _____
Comments: Private surface cultivated land. There may be species of concern that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to what he would like done, if a species of concern is discovered at this location. The Board of Oil & Gas has no jurisdiction over private surface lands.

Historical/Cultural/Paleontological

(possible concerns)
Proximity to known sites: None identified.
Mitigation
__ avoidance (topographic tolerance, location exception)
__ other agency review (SHPO, DSL, federal agencies)
__ Other: _____
Comments: Private surface cultivated land. There may be possible historical/cultural/paleontological sites that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to his desires to preserve these sites or not, if they are found during construction of the wellsite. The Board of Oil & Gas has no jurisdiction over private surface lands.

Social/Economic

(possible concerns)
__ Substantial effect on tax base
__ Create demand for new governmental services
__ Population increase or relocation
Comments: Wildcat well. No concerns

_____
_____

Remarks or Special Concerns for this site

An single lateral horizontal Bakken Formation well test to be drilled to 20,787'MD/10,415'TVD.
_____

Summary: Evaluation of Impacts and Cumulative effects

No long term impacts expected, some short term impacts will occur, but can be mitigated.
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I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/Steven Sasaki
(title:) Chief Field Inspector
Date: February 11, 2012

Other Persons Contacted:

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Montana Bureau of Mines and Geology, GWIC website _____
(Name and Agency)
Roosevelt County water wells_____
(subject discussed)
February 11, 2012_____
(date)

US Fish and Wildlife, Region 6 website
(Name and Agency)
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA COUNTIES, Roosevelt County, Montana
(subject discussed)
February 11, 2012

Montana Natural Heritage Program Website
(Name and Agency)
Heritage State Rank= S1, S2, S3, Location T26N R58E
(subject discussed)

February 11, 2012_____
(date)

If location was inspected before permit approval:
Inspection date: _____
Inspector: _____
Others present during inspection: _____